

Abstract

Lime-free admixture compositions comprising a combination of ingredients are disclosed. The ingredients of the lime-free admixture compositions comprise a combination of emulsifiers, toughening resins/plasticizers, adhesive resins, pumping aids for providing lubrication, rheology controllers, water retention agents, water repellants/overcoat finishes, accelerators, liquid adsorbents/water reducers and air entraining agents. The lime-free admixture compositions are total replacements for lime. The ingredients of the lime-free admixture compositions have specific purposes that lead to optimized properties when used in combination with a binder comprising hydraulic cement. The lime-free admixture compositions are non-corrosive, making them safe to use by workers and they have rheological properties that make them suitable for use in various applications including concrete, mortars, grouts and stuccos. The ingredients comprising lime-free admixture compositions are biodegradable and therefore environmentally friendly.